

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-005835**Date Inspected:** 25-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung Fu Kuan**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Jacking and Deviation Saddles**Summary of Items Observed:**

On this date, 3/25/09, Caltrans OSM Quality Assurance (QA) Inspector Mike Brcic was present during the times noted above for observations relative to the work being performed on castings, in either the Fabrication shop #4 or Foundry Shop at Japan Steel Works.

The QA Inspector witnessed the mechanical test (tensile) of heat no. 08W107-1 for west deviation saddle W2-W1.

The (1) test specimen were prepared and tested after the stress relieved condition. The structural casting material grade was 415 and the tensile test specimen was 12.5 mm in diameter with a gage length of (50) mm. The QA Inspector observed that the results of the yield strength, tensile strength, elongation, and reduction of area on the tensile test specimen tested were in compliance with the table listed under the Castings section of the contract special provisions.

The QA Inspector also witnessed the mechanical test (Charpy-V-Notch) of heat no. 08W107-1 for west deviation saddle W2-W1. The (3) test specimens were tested after the stress relieved condition and were dimensionally prepared within the tolerances in accordance with ASTM E-23 Figure 2 Izod (Cantilever-Beam) Impact Test Specimen, Type D. The (3) specimens were held at a temperature of (0) degrees Celsius for 10 minutes and temperature of the liquid bath was held to within plus or minus (1) degree Celsius. The (3) specimens were removed from the liquid bath and the test was conducted within the (5) second time frame as per the requirements in ASTM E-23. The QA Inspector observed that the results of the individual impact tests and the average of the (3) specimens along with the lateral expansion measured of each specimen were in compliance with the table listed under the Castings section of the contract special provisions. Afterward, the QA Inspector reviewed the test report for accuracy and completeness and assigned Caltrans Lot number B275-001-09.

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W2E3 - Casting is sitting idle in Fab Shop #4, its "soon to be joined" built up section is having its "milled to bear" surface scribed / marked for an appropriate land.

W2W1 - QAI Mr Brcic and Mr Peterson witnessed demonstration of Wet Process on as Finished Casted Level 1 area (300mm squared). The comparison was to only give a small look into the process differences and/or similarities. JSW will submit an ECS with a suggested test of 10% of previously accepted castings (done with Dry powder method, see report dated 3/18/09, Report # WIR-005813)

W2W2 - West Deviation Casting is still waiting shot blast.

W2W3 - Repair welding pending on Casted Section (moved to pit in foundry, preheat beginning for weld repair, awaiting receipt of Engineering Communication Sheet(ECS)/ Submittal regarding Major repairs identified.

T1-3 - Weld of joints 7Y-12U-1 and 7Y6U commencing. Welders assigned, but not yet welding, were K. Iwamoto, ID 07-4366, and D. Hirakawa 08-3566 utilizing WPS SJ3012-1-1, CWI, Chung Fu Kuan, assisted during QAI walk-through, preheat was verified at surface (tested between 1 and 3 inches from toe of buttering) utilizing a Tempilstik, temperature shy of requirement of 150 Celsius, weld operation will not commence without prior approval of QC CWI Mr Kuan, heated portable rod quivers are in use to maintain "oven" temperatures.

E2E1 - Shaping function in progress, Carbon Arc method employed.

E2W1 - Mechanical grinding of carbon arced surface to casting in progress, approximately 35% complete.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with applicable contract documents.

Summary of Conversations:

No significant conversations to report on this day.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 1(510)385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Brcic,Michael	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer
